Abstract of Poster Presentation

Histochemical and cytochemical investigations of phenols in leaves of banana infected by the *Mycosphaerella fijiensis*

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Several types of biotic and abiotic stimulations are known as potential activators of phenolic compounds production on plants with defense mechanisms. Different studies showed that the increase of the synthesis of phenolic compounds on plants after pathogens attack is frequent (Matern et al., 1995; De Ascensao et al., 2003). For resistant plants, defense responses based on phenolic compounds production are characterized by the early and rapid phenols accumulation on infection site, resulting in effective pathogen insulation. Resistant "Calcutta 4", partially resistant "Pisang Madu" and susceptible "Grande Naine" banana tree cultivars to the black Sigatoka were infected *in vitro* by *Mycosphaerella fijiensis* and studied in the presence of polyphenols on the processes of plant-pathogen interaction, during the kinetics of 5, 7,10, 15, 21, 25 days after inoculation. Cuts with 60 µm of thickness with cryomicrotome assistance were colored with: DMACA, Vannilin-HCl and Neu's reagent and then observed with optical and epifluorescence microscopy. After 15 days, it was observed for the "Calcutta 4" and "Pisang Madu" cultivars the presence of condensate tannins and catechins characterized by the reddish color with Vannilin-HCl of some mesophyll cells when compared with the control plant. It was not observed any presence of condensate tannins and catechins for the susceptible "Grande Naine"cultivar. It was concluded that the presence of condensate tannins and catechins is directly related with the plant defense mechanisms against pathogens for the *M. fijiensis-Musa acuminata* interaction. This is the first report of the presence of condensate tannins and catechins for this pathosystem.